Cyclohexylamine

Cyclohexylamine[1]	
[[Image:Cyclohexylamine-2D-skeletal.png	]]
[[Image:Cyclohexylamine-side-3D-balls.png	]]
Identifiers	
CAS number	108-91-8 [2] ✓
PubChem	7965 [3]
ChemSpider	7677 [4] ✓
EC number	203-629-0 [5]
RTECS number	GX0700000
Properties	
Molecular formula	$C_6H_{13}N$
Molar mass	99.17 g mol^{-1}
Appearance	clear to yellowish liquid
Density	0.8647
Melting point	-17.7 °C, 255 K, 0 °F
Boiling point	134.5 °C, 408 K, 274 °F
Solubility in water	Miscible
Solubility in methanol	methanol 8.74 M [6]
Acidity (pK_a)	10.64[7]
Hazards	
S-phrases	S36 S37 S39
R/S statement	R21 R23 R25 R36 R37 R38 R41
NFPA 704	
Flash point	28.6 °C
✓ (what is this?) (verify) [8] Except where noted otherwise, data are given for materials in their standard state (at 25 °C, 100 kPa)	
Infobox references	

Cyclohexylamine, also called **hexahydroaniline**, **1-aminocyclohexane**, or **aminohexahydrobenzene**, is an organic chemical, an amine derived from cyclohexane. It is a clear to yellowish liquid with fishy odor, with melting point of −17.7 °C and boiling point 134.5 °C, miscible with water. Like other amines, it is of mildly alkaline nature, compared to strong bases such as NaOH, but it is a stronger base than aniline, which differs only in that its ring is aromatic. It is flammable, with flash point at 28.6 °C. Explosive mixtures with air can be formed above 26 °C. It is toxic by both ingestion and inhalation; the inhalation itself may be fatal. It readily absorbs through skin, which it irritates. It is corrosive. Cyclohexylamine is listed as an extremely hazardous substance as defined by Section 302 of

the U.S. Emergency Planning and Community Right-to-Know Act.

Cyclohexylamine is used as an intermediate in synthesis of some herbicides, antioxidants, accelerators for vulcanization, pharmaceuticals (e.g., mucolytics, analgesics, and bronchodilators), corrosion inhibitors, some sweeteners (the most notable one being cyclamate), etc. It has been used as a flushing aid in the printing ink industry.[9]

References

[1] *Merck Index*, 11th Edition, **2735**.
[2] http://www.commonchemistry.org/ChemicalDetail.aspx?ref=108-91-8
[3] http://pubchem.ncbi.nlm.nih.gov/summary/summary.cgi?cid=7965
[4] http://www.chemspider.com/7677
[5] http://ecb.jrc.ec.europa.eu/esis/index.php?GENRE=ECNO&ENTREE=203-629-0
[6] Solubility of cyclohexylamine in methanol (http://oru.edu/cccda/sl/solubility/ugidata.php?solute=cyclohexylamine&solvent=methanol)
[7] Hall, H.K., *J. Am. Chem. Soc.*, **1957**, *79*, 5441.
[8] http://en.wikipedia.org/wiki/%3Acyclohexylamine?diff=cur&oldid=398778851
[9] Apps, E. A. (1958). *Printing Ink Technology*. London: Leonard Hill [Books] Limited. pp. ix.

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